



THE UNIVERSITY *of* EDINBURGH

Edinburgh Research Explorer

Industrial CO2 Source Clusters in Scotland

Citation for published version:

Brownsort, P 2013 'Industrial CO2 Source Clusters in Scotland' SCCS Working Papers, no. WP SCCS 2013-06, SCCS, pp. 1-2. <<http://hdl.handle.net/1842/15692>>

Link:

[Link to publication record in Edinburgh Research Explorer](#)

General rights

Copyright for the publications made accessible via the Edinburgh Research Explorer is retained by the author(s) and / or other copyright owners and it is a condition of accessing these publications that users recognise and abide by the legal requirements associated with these rights.

Take down policy

The University of Edinburgh has made every reasonable effort to ensure that Edinburgh Research Explorer content complies with UK legislation. If you believe that the public display of this file breaches copyright please contact openaccess@ed.ac.uk providing details, and we will remove access to the work immediately and investigate your claim.

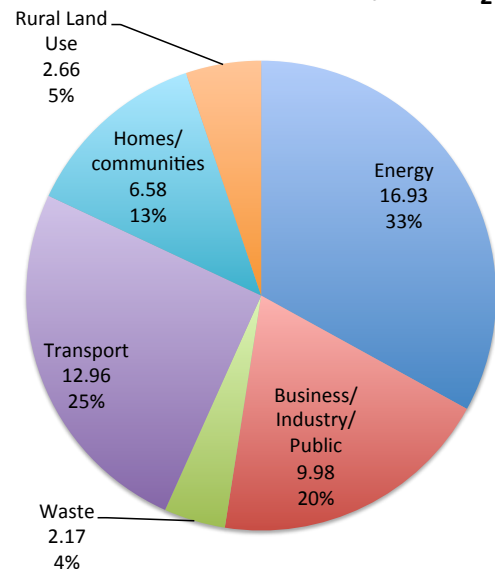


Industrial CO₂ Source Clusters in Scotland



- 57% of Scottish emissions are from Energy and Industry
 - 29.1 Mt/yr from a total of 51.3 Mt/yr
- Statutory targets require overall reduction by 22.6 Mt/yr (-42.4%) by 2027
- This compares to IPCC figure of 34-40% reduction required from industry in EU to achieve 2DS scenario
- Scottish CO₂ emissions in 2011 from 91 emitters, total 22.4 Mt/yr
 - Data from SEPA's Scottish Pollutant Release Inventory
 - Threshold >10,000 t/yr

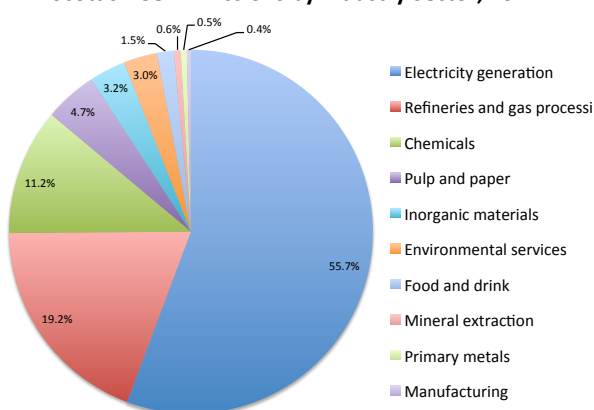
Scottish Emissions 2011, MtCO₂e



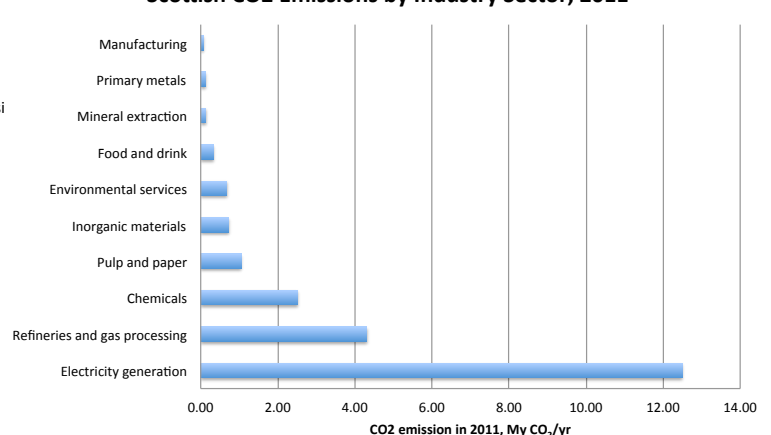
Scottish Government, 2013. *Low Carbon Scotland: Meeting our Emissions Reduction Targets 2013-2027. The Second Report on Proposals and Policies* <http://www.scotland.gov.uk/Publications/2013/06/6387>

- Power generation and industry account for more than half of Scotland's total CO₂ emissions

Scottish CO₂ Emissions by Industry Sector, 2011



Scottish CO₂ Emissions by Industry Sector, 2011

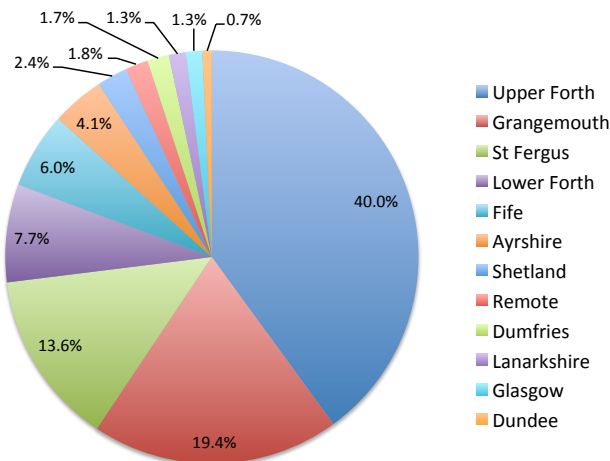


SEPA, 2013. http://www.sepa.org.uk/air/process_industry_regulation/pollutant_release_inventory.aspx

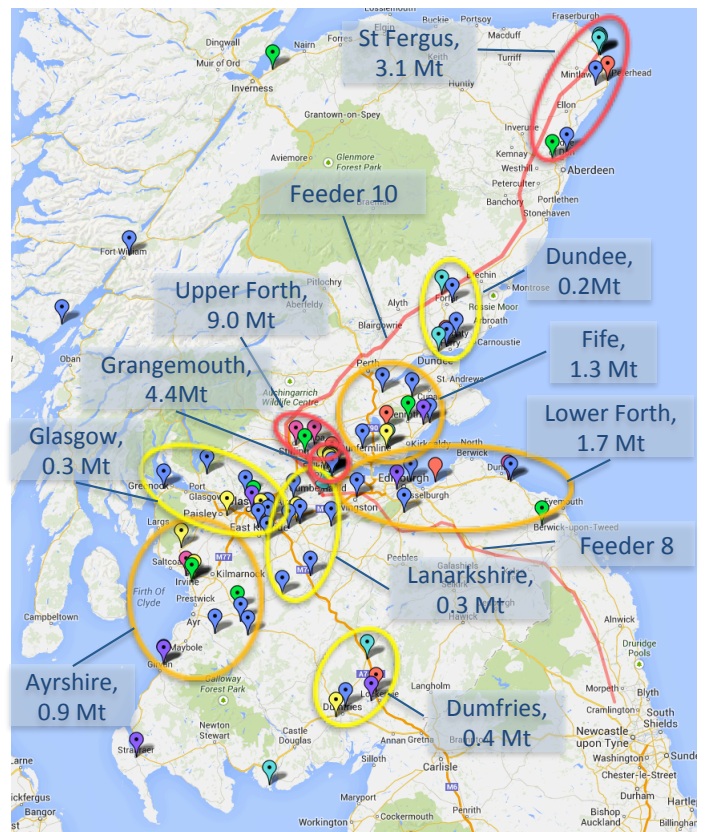
- National and international targets seek 40% emission reductions by 2030
- CCS from large industrial sources can play major role in achieving 2030 emission reduction targets

- Power and process industries in Scotland are generally clustered; 73% of emissions are within 10km of an available pipeline, 88% within 20km

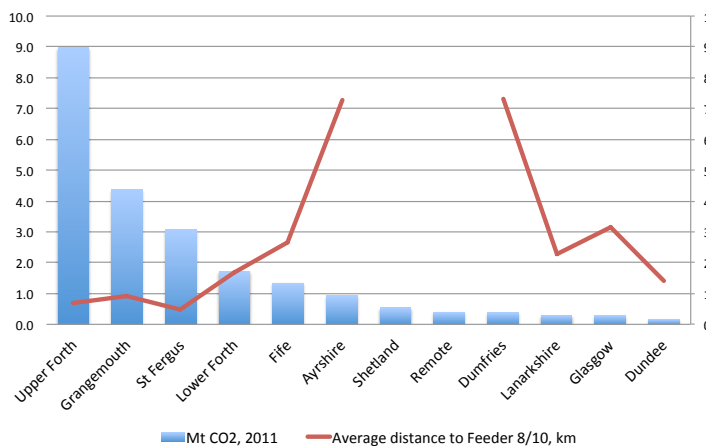
Share of Scottish CO2 Emissions by Cluster



- Most onshore emissions in Scotland are in central belt
- Routes of Feeder 10 and 8 are close to many large emitters
 - Potentially available high pressure gas-grid pipelines

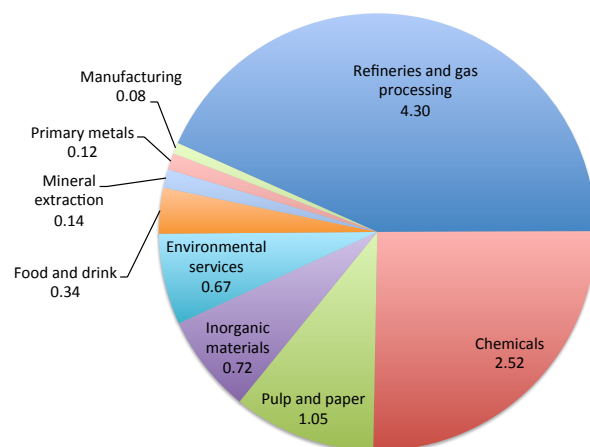


Scottish CO₂ Emission Clusters: size and distance to feeder



- Main clusters at Upper FORTH, Grangemouth, St Fergus
- Account for 73% of emissions in 2011
- Located within 10km of Feeder 10

Industrial CO₂ emissions in Scotland (non power), 2011 Mt



- In Scotland we have
 - Refineries and gas separation
 - Chemicals
 - Pulp, paper and board
 - Cement and glass

- Refineries, gas processing, chemicals, pulp/paper/board and cement industries in Scotland all have significant emissions, each >0.5 Mt/yr